

### ABSTRACT

A novel and improved engine data system for collecting, displaying and analyzing engine/vehicle data is provided. The system have advantageously results in a more effective, convenient, portable and low cost method of monitoring and processing vehicle data. The vehicle data system includes a handheld computer containing operating system software adapted to operate the handheld computer in accordance with a data protocol different from a vehicle bus protocol and a handheld microprocessor for executing the operating system software. The system importantly includes an adapter for creating a data pathway between a vehicle bus connector and an external data port provided on the handheld computer which is physically incompatible with the engine bus connector. The adapter includes a data port connector for connection with the external data port, a bus compatible connector for connection with the engine bus connector, a battery power supply separate from the power supply of the handheld compuer and an adapter microprocessor powered by the battery power supply and connected via the data pathway with the bus compatible connector for protocol conversion of the data received from the engine bus. An engine data adapter system for creating a data pathway between the engine data bus and the handheld computer while determining the start and stop of messages received from the data bus and adding message identifiers to the engine data so as to minimize the required data processing by the handheld computer.